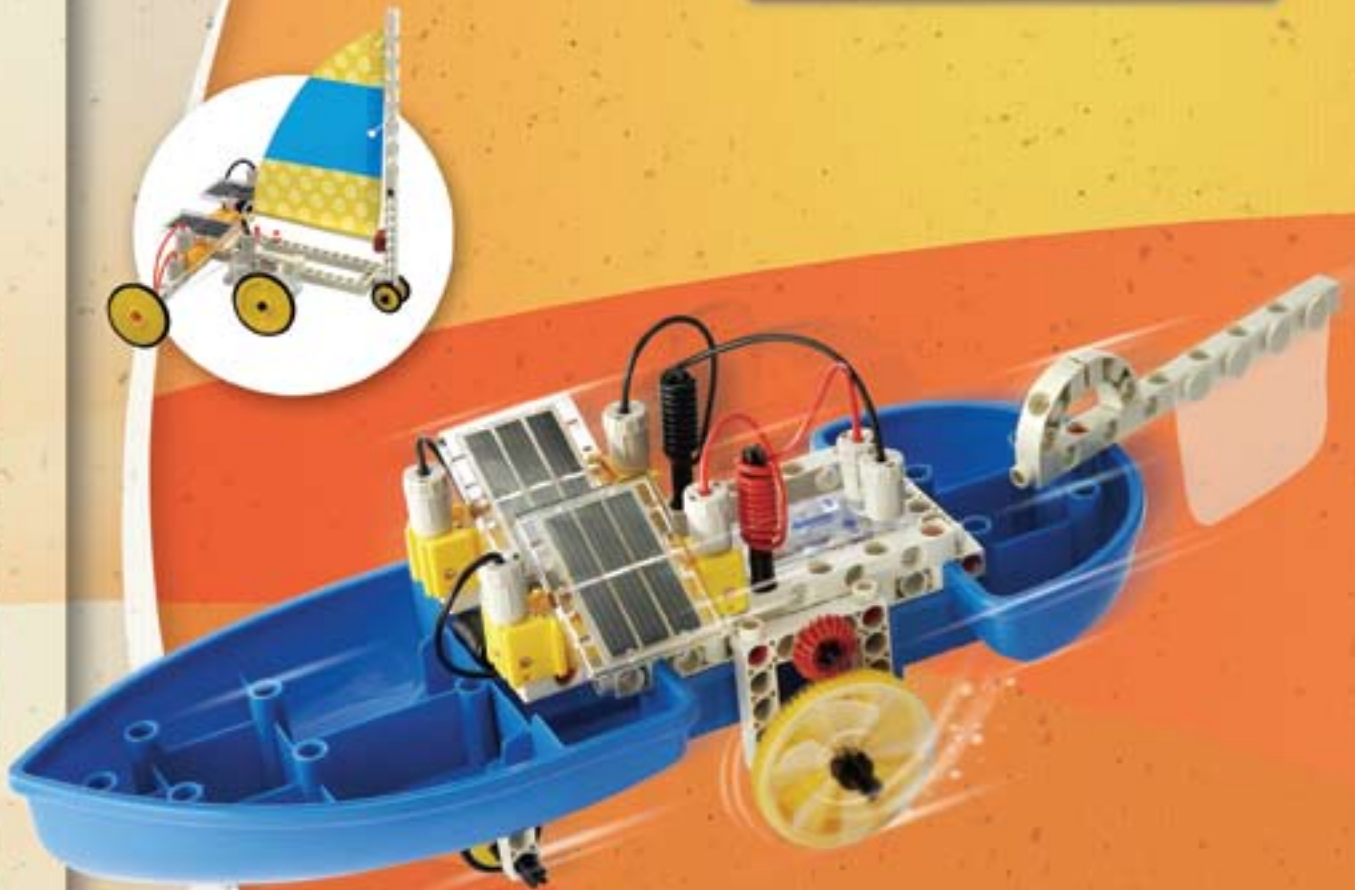


SOLAR POWER PLUS+

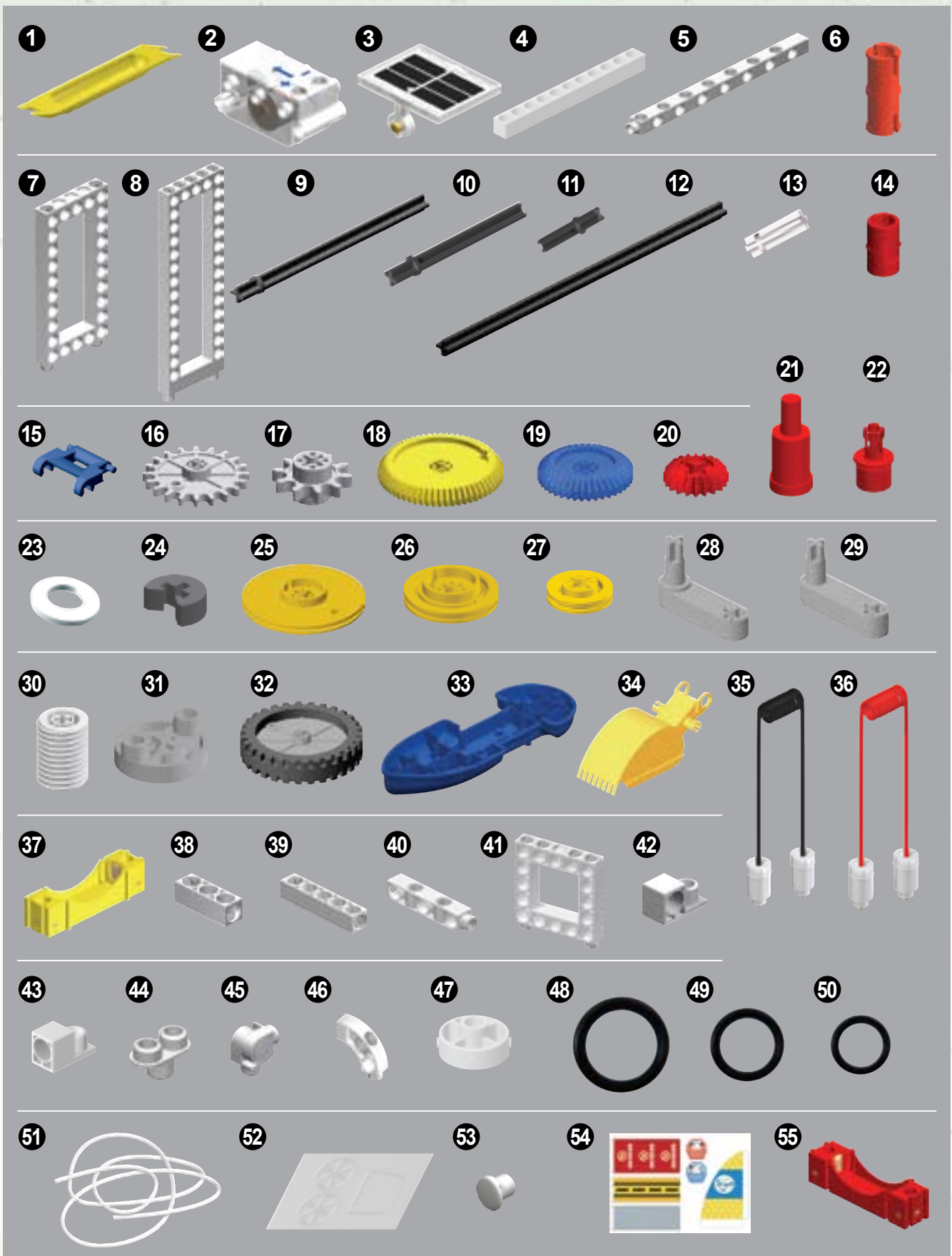


Instruction Book



SOLAR POWER PLUS | Parts List

No.	Part Name	Pcs.	No.	Part Name	Pcs.
1	PART SEPARATOR TOOL	1	28	CRANK WITH FLANGE	1
2	REVERSIBLE MOTOR/GENERATOR	1	29	CRANK WITHOUT FLANGE	1
3	ADJUSTABLE SOLAR PANEL	2	30	WORM GEAR II	1
4	11-HOLE ROD	6	31	ROD CONNECTOR	2
5	7-HOLE DUAL LONG ROD	6	32	WHEEL AND TIRE	4
6	JOINT PIN	10	33	BOAT	1
7	SHORT FRAME	4	34	DIGGING BUCKET	1
8	LONG FRAME	8	35	WIRE CONNECTOR - BLACK	2
9	LONG AXLE	3	36	WIRE CONNECTOR - RED	1
10	MEDIUM AXLE	9	37	BATTERY HOLDER	2
11	SMALL AXLE	3	38	3-HOLE ROD	10
12	EXTRA LARGE AXLE	2	39	5-HOLE ROD	9
13	MOTOR AXLE	2	40	3-HOLE DUAL ROD	6
14	ANCHOR PIN	34	41	SQUARE FRAME	6
15	CHAIN UNIT	41	42	90 DEGREE CONVERTER - L	4
16	MEDIUM SPROCKET	1	43	90 DEGREE CONVERTER - R	4
17	SMALL SPROCKET	1	44	TWO-TO-ONE CONVERTER	6
18	LARGE GEAR	2	45	HINGE	8
19	MEDIUM GEAR	4	46	CURVED ELBOW ROD	8
20	SMALL GEAR	6	47	SPOKED ROUND BLOCK	1
21	SHAFT PIN	2	48	O RING LARGE	3
22	SHAFT PLUG	4	49	O RING MEDIUM	4
23	WASHER	3	50	O RING SMALL	3
24	GEAR FIXING	4	51	STRING (400 CM)	1
25	LARGE PULLEY	3	52	BLADES & RUDDER SHEET	1
26	MEDIUM PULLEY	4	53	BUTTON PIN	4
27	SMALL PULLEY	3	54	DIE CUT CARDBOARD	1
			55	BATTERY CHARGER	1
			TOTAL		265

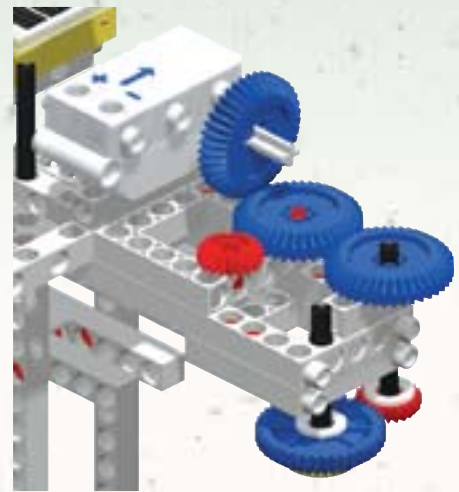




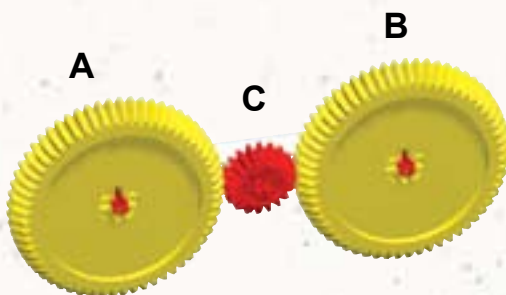
SOLAR POWER PLUS | About the Gears

SPUR AND BEVEL GEARS

The gear set contains both spur and bevel gears. This kit contains “spur gears,” which mesh in the same plane and regulate the speed or the turning direction of the shafts, and “bevel gears” (the beveled edges of the gears) which mesh together at right angles to the initial turning plane of the gears and shafts to change the plane of rotation.



Gear Experiments



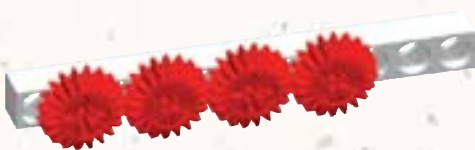
1. Try assembling a red 20-tooth gear so that it meshes with two yellow 60-tooth gears as shown. Turn gear A. Does gear B turn faster, slower, or at the same speed as gear A? If you turn gear A clockwise, which way does gear B turn?

Do you think it would make any difference to gears A or B if you put a larger gear in between them? Try it.

Did you notice any difference?

DID YOU KNOW?

Gear C is called an idler gear. It connects two other gears together but does not actually drive anything else by itself.



2. Connect four small gears in a row along the edge of the base grid or along a rod.

What do you notice about the direction in which they turn?



3. Assemble two yellow 60-tooth gears and a blue 40-tooth gear as shown.

Can you explain why the gears will not turn?



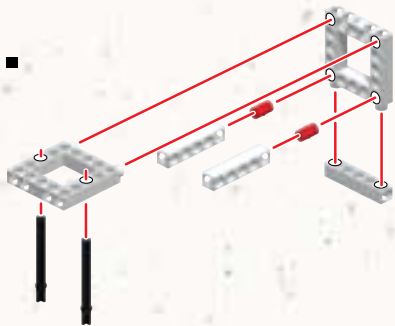
SOLAR POWER PLUS | Cement Mixer Truck

PARTS NEEDED

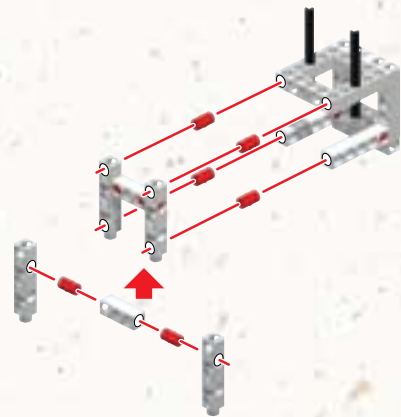
2	3	17	24	32	16	15	20	18	9	5	12	38	39
X1	X2	X1	X4	X4	X1	X41	X2	X2	X1	X2	X1	X4	X9

1	40	41	37	11	14	46	42	10	23	35	36
X1	X6	X2	X2	X1	X24	X1	X2	X4	X1	X2	X1

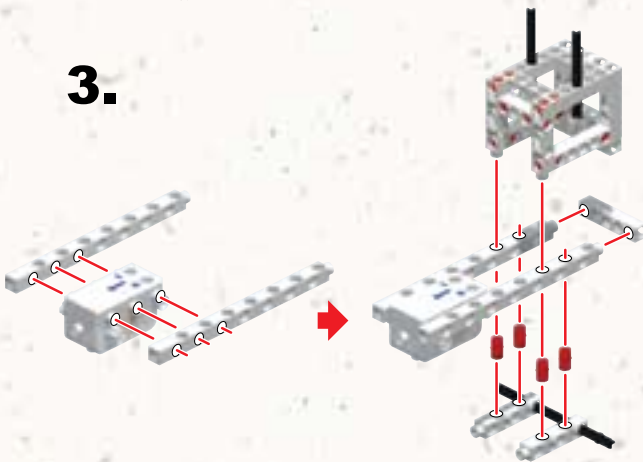
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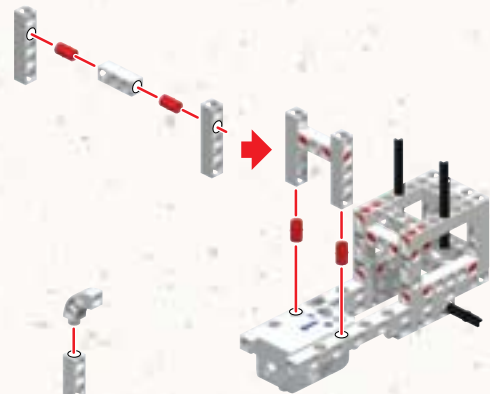
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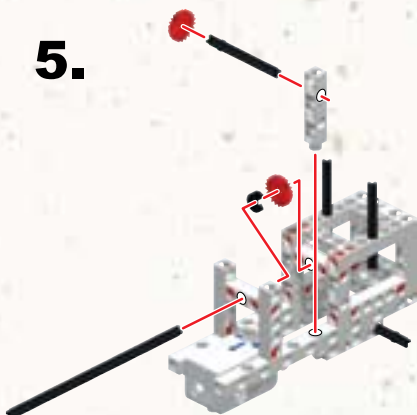
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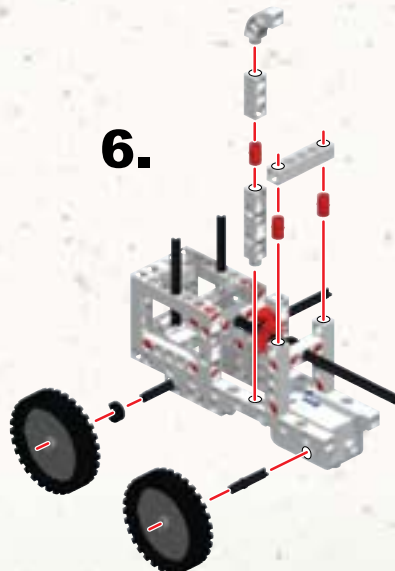
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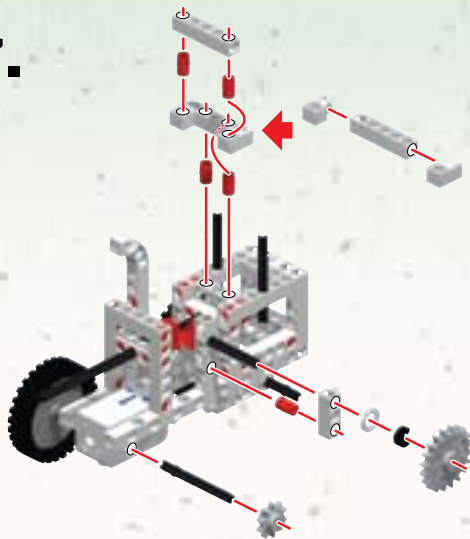


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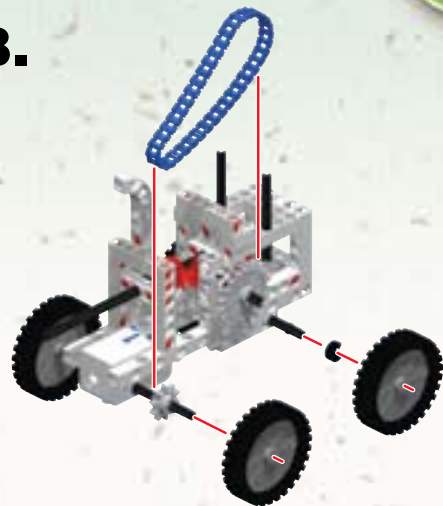




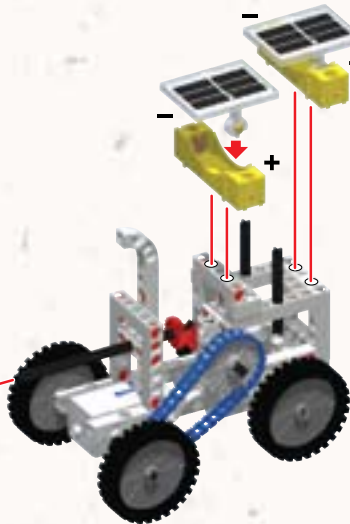
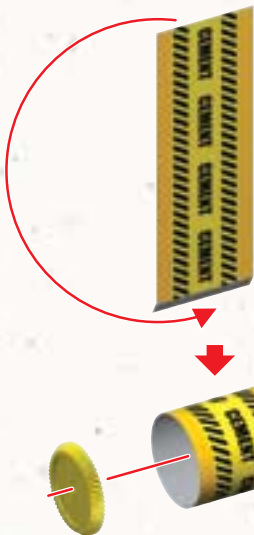
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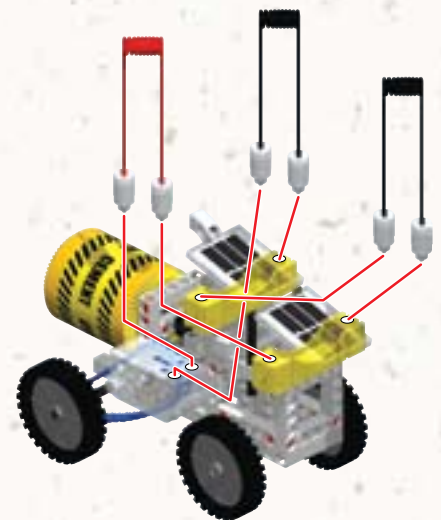
8.



9.



10.



TIP

Reverse the wires connecting the solar panels to the motor as the picture shows to make your truck move in the right direction.

completed